8. Kirill

Program Name: Kirill.java **Input File: kirill.dat**

Kirill is learning about self numbers! Let $SOD(n)$ be the sum of the digits in n. For example,

- $SOD(56) = 5 + 6 = 11$
- $SOD(2) = 2$
- $SOD(304) = 3 + 0 + 4 = 7$

A positive integer x is a self number if there is no positive integer y where $y + SOD(y) = x$. 20 is a self number, but 21 is not a self number $(15 + SOD(15) = 15 + 1 + 5 = 21)$.

Given an upper bound N, find the largest self number that is less than or equal to N.

Input: The first line of input has an integer T ($1 \leq T \leq 50$), the number of test cases. Each of the next T lines has a single integer N ($1 \leq N \leq 5{,}000{,}000$).

Output: For each test case, output the largest self number that is less than or equal to N.

Sample Input:
```
5
22
9
2
60
1234567
```

Sample Output:
```
Case #1: 20
Case #2: 9
Case #3: 1
Case #4: 53
Case #5: 1234557
```

Hint: The first few self numbers are $1, 3, 5, 7, 9, 20, 31, 42,$ and 53.